

"CREST IRON ORE DEVELOPMENT"

By

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A synopsis of an address to the Northern Resources Conference, Whitehorse, Yukon Territory - March 21, 1963 by C.D.H. Dahlstrom

The occurrence of hematite float in the Peel drainage system has been common knowledge since gold rush days and many published reports have speculated on the existence of large iron deposits in the Mackenzie and Wernecke Mountains. The first to locate and recognize the potential of the Snake River deposit were members of a California Standard geological field party during the late fall of 1961. The advent of winter precluded staking that year and it was not until the spring of 1962 that Crest Exploration acquired a group of claims straddling the Yukon - Northwest Territories boundary between the Snake and Cranswick Rivers.

The block of claims is a large one, covering an area of 100,000 acres. Staking such an area in mountainous terrain is difficult enough but doing so unobtrusively during the break-up period presented a real problem in logistics. Fuel and supplies were cached during the winter by Beaver aircraft operating from the airstrip at the Standard of British Columbia well on the Blackstone River. The initial party was flown in prior to break-up to establish camps, to cut and distribute claim posts and to generally make arrangements for the subsequent staking parties. Staking began immediately before break-up and continued until 862 claims had been staked, 493 in the Yukon Territory and 369 claims in the Northwest Territories. Because the area was so remote from the mining recorder's office and since staking was taking place during the spring break-up period, a little used provision of the Yukon Quartz Mining Act was invoked to permit the appointment by the stakers of one of their number to act as an emergency mining recorder. By recording claims in the field this temporary recorder was able to ensure that staking and documentation were correct before the stakers left the field. The staking was a large and complex operation and it is a tribute to the organization by Dr. G.G.L. Henderson and to the versatility of modern air transport that the operation was completed successfully and without incident.

During the months of July and August a program of mapping and sampling was begun to determine the magnitude and grade of the deposit. Topographic and geological maps were prepared and sampling crews measured, described and sampled numerous ore exposures. One experimental diamond drill hole was drilled. The work clearly indicated that this is one of the world's larger iron deposits, having ultimate reserves in the tens of billions of tons with several billions of tons available as open pit ore. The iron content of the hematite jasper ore varies between 45% and 50%, although pit grade will be somewhat lowered by occasional bands of waste which may have to be mined with the ore. The principal ore zone varies in gross thickness from 90 feet to a maximum of 340 feet in its exposed length of 30 miles but in the area of easiest mining the thickness is 275 to 300 feet.

Such an iron resource must ultimately be utilized. Whether this utilization is near or distant depends upon three factors - beneficiation, transportation and markets. The day when iron ore could be mined and shipped in its raw form has gone. Modern blast furnace operators demand a high grade product consistently tailored to exacting specifications. Undoubtedly a marketable produce can be made from the Snake River ore but how and at what cost remains to be determined. It is 420 miles in a straight line from the iron prospect to the nearest seaport. Whether by rail or by pipeline the distance will be long and transportation charges will be large relative to the selling price of iron ore, which is a rather low price commodity. Once at the sea the ore is available to the Pacific marketing area, which consists of Japan and the western parts of the United States and Canada. There is no shortage of iron reserve in this area so there is strong market competition to be met, particularly with the recent increase in Australian activity. Each of the three factors of beneficiation, transportation and marketing pose problems which must be accurately evaluated before

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This summer a substantial field program of diamond drilling and surface sampling is planned to complete the initial exploratory phase of the grade and tonnage evaluation. Surveying and other routine representation work will also be done. Laboratory and office investigations of beneficiation, transportation and marketing are presently being done to provide a realistic appraisal of the feasibility of overall project as soon as possible.

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